will be loaned by exhibitors. In many cases there will be lectures to take the audience through a pictorial tour of a plant and they will be shown machinery and processes in the manufacture of materials that, until then, had never been previously shown. Many of the films are at present being made and are expected to be finished in time to be shown at the exposition. A few of these films are as follows:

Making of Black Powder,
Manufacture of Iron,
Manufacture of Fertilizers,
Mining and Manufacturing of Iron,
Manufacturing of Silk,
Making of Blotting Paper,
Silver Mining,
Manufacturing of Varnish,
Asphalt.

Two other features of the exposition that have been added this year are a large section showing the opportunities that await the chemist in our south and known as the "Southern Opportunity" section and a section for the "Paper and Pulp Industry" composed of materials and machinery used in the manufacture of paper and other related products.

The "Southern Opportunity" section is an ambitious undertaking to display the latent wealth in the undeveloped resources of the south. It will show that the materials have formerly been shipped to foreign countries to be enhanced in value by manufacture and returned to the original producers at a greater price.

The Bureau of Mines is preparing an elaborate exhibit that will cover much space—it will be a working exhibit, one where the visitor can see the "wheels go round."

The exposition will be opened by Dr. Charles H. Herty, president of the American Chemical Society and chairman of the exposition advisory committee. Mr. Francis A. J. Fitzgerald, president of the American Electrochemical Society, and Arthur B. Daniels, president of American Paper and Pulp Association, will also make addresses.

The American Chemical Society, whose annual meeting is being held during the week and in conjunction with the exposition, has arranged for conference meetings at the exposition. Other meetings of the society will be held at Columbia University, at the College of the City of New York and the Chemists Club.

The Chemists Club, which is a few squares from the Grand Central Palace, has been selected as the headquarters of the American Chemical Society, and on Monday afternoon the council of the society will hold a business meeting there, followed by a dinner tendered to the council by the New York Section.

The American Electrochemical Society has arranged a series of meetings beginning on Thursday morning, September 28, with the "Made in America" technical session at the Grand Central Palace. This session will be devoted to papers and discussions on the varied electrochemical industries of America, followed on Friday morning by another technical session, devoted to the theoretical side of electrochemistry. Registration will be on Wednesday evening at the exposition, headquarters of the society being at the Electrochemical Society booth.

The Technical Association of Pulp and Paper Industry, which is also holding meetings in conjunction with the exposition, is arranging headquarters in the midst of the "Paper and Pulp Industry" Section on the second floor of the Grand Central Palace. A large number of interesting papers are promised on the technical aspects of pulp and paper manufacturing. On Friday morning the meeting will be held in the auditorium at the Grand Central Palace, and the afternoon meeting will be a joint conference with the American Chemical Society.

The members of the American Chemical Society and the American Electrochemical Society will receive badges which will admit them to the exposition without further tickets.

SCIENTIFIC NOTES AND NEWS

Sir T. Clifford Allbutt has been elected president of the British Medical Association. A message of congratulation was at the time sent to him on the attainment of his eightieth birthday which occurred on July 20.

SIR NORMAN LOCKYER has been elected a foreign honorary member of the American Academy of Arts and Sciences.

THE Paris Academy of Sciences has voted to confer its Delalande-Guerineau prize on Sir Ernest Shackleton.

PROFESSOR C. F. MARVIN, chief of the Weather Bureau, and Dr. L. O. Howard, chief of the Bureau of Entomology, have been appointed by the secretary of agriculture to represent the U. S. Department of Agriculture on the Council of Research which is being organized by the National Academy of Sciences.

THE forty-fourth annual meeting of the American Public Health Association will be held in Cincinnati, October 24 to 27, under the presidency of Dr. John F. Anderson, of New Brunswick, N. J., formerly assistant surgeon general of the United States Public Health Service.

DR. EMERY R. HAYHURST, of Columbus, has resigned as chief of the bureau of occupational diseases of the Ohio State Department of Health, to accept the assistant professorship of industrial hygiene in the Ohio State University. Dr. Roscoe P. Albaugh succeeds Dr. Hayhurst as chief of the bureau of occupational diseases.

THE Chicago commissioner of health has appointed a committee to undertake research on infantile paralysis. The members are: Dr. M. Herzog, chairman, and Drs. K. Meyer, H. B. Thomas, A. Hoyne and A. K. Armstrong.

J. N. B. HEWITT, of the Bureau of American Ethnology, is continuing this summer his ethnologic researches among the Iroquois tribes.

VAN H. MANNING, director of the bureau of mines of the department of the interior, visited Seattle on August 14 for the purpose of determining whether the experimental mining and metallurgical station to be established in the northwest by the federal government should be in Seattle. Dean Milnor Roberts, of the college of mines of the University of Washington, has offered the facilities of his college for use by the station and has asked that the station be located on the university campus. Mr. Manning also inspected other possible locations for the station.

DR. W. A. MURRILL returned on August 21 from a vacation of two weeks spent in the Catskills, at Arkville, Delaware County, New York, where he obtained about 400 numbers of fungi for the New York Botanical Garden herbarium. Arkville is of special interest to botanists in New York City because it is included in the local flora range and furnishes many species found in the Adirondacks.

THE George Williams Hooper Foundation for Medical Research of the University of California has sent a member of its staff, Dr. Ernest Linwood Walker, associate professor of tropical medicine, to South America, to carry on investigations as to tropical diseases on the upper reaches of the Amazon. He will be stationed for most of the year 1,500 miles up the Amazon, in the region of Porto Zelho, Rio Madeira, Amazon, Brazil. For his researches as to parasitic infections of man he is to have the privileges of the hospital maintained there by the Madeira-Mamora Railroad, of which the medical director is Dr. Allen M. Walker, a graduate of 1907 of the University of California Medical School.

A CABLEGRAM to the press from Buenos Aires reports that Sir Ernest Shackleton left Punta Arenas, Chile, on August 26, on board the ship *Yelcho,* to make a third attempt to rescue the members of his expedition marooned on Elephant Island.

AT the meeting of the American Chemical Society, to be held in New York, from September 25 to 30, the program will include a symposium on occupational diseases which will be presided over by Professor Charles Baskerville, head of the department of chemistry of the College of the City of New York. Among the topics which will be discussed are the chemical trades, prophylaxis in chemical industry, diseases incidental to work in aniline and other coal tar products, cedar lumber, mines and explosives. There will be a general discussion, the speakers including Dr. W. Gilman Thompson, of New York; Dr. F. L. Hofman, Dr. J. W. Schereschewsky, G. P.

Adamson, H. K. Benson, W. A. Lynott, Alice Hamilton and J. B. Andrews.

Dr. Charles Lincoln Edwards, director of nature study in the Los Angeles Public Schools, gave an illustrated lecture on the evening of August 16 before the California Academy of Sciences on his experiences in the Bahama Islands.

The eighth biennial vacation course in connection with the School of Geography at Oxford was held this year between the 3d and 18th of August. The opening address was given by Dr. Keltie on "The Progress of Geography in the last half-century and its present position."

At the annual meeting of the British Pharmaceutical Conference, held on July 12, Dr. David Hooper devoted his presidential address chiefly to an account of the drug resources of India and the British colonies.

Arthur Marion Brumback, professor of chemistry in Denison University since 1905, died on August 12, aged forty-seven years.

William Scrugham Lyon, known as an authority in botany and horticulture in the Philippine Islands, died on July 20, in Manila. Mr. Lyon served at one time as head of the California State Board of Forestry. In 1902 he went to the Philippines for the Bureau of Agriculture. In 1905, he left this bureau to engage in the business of collecting and exporting orchids, in which he continued until the time of his death.

Professor Scott, of the electrical engineering department of Robert College, Constantinople, has been killed by contact with a wire carrying 10,000 volts.

Dr. J. A. Harvie-Brown, a Scottish landed proprietor and ornithologist, died on July 26, at the age of seventy-two years.

Among deaths in the war announced in *Nature* are: C. M. Selby, formerly assistant naturalist in the Dublin National Museum; A. St. Hill Gibbons, known for his geographical explorations in Africa; Arthur Poynting, only son of the late J. H. Poynting, F.R.S., an engineer; and George Andrew Herdman, only son of W. A. Herdman, F.R.S., who, though only twenty years of age, had published investigations on biological problems.

The death is announced of Dr. Alexandre Layet, formerly professor of hygiene at Bordeaux, and correspondent of the Paris Academy of Medicine.

According to the report presented to the British Medical Association, more than 400 British physicians have lost their lives at the front in the past twelve months.

Twenty graduates of American universities left Paris for the front on August 16, as members of a newly formed section of the American ambulance field service.

The sum of $50,000 has been given by Mrs. Streatfeild, to be held in trust jointly by the Royal College of Physicians of London and the Royal College of Surgeons of England, for the promotion of research.

It is announced that the present Lord Avebury has handed to the British Museum authorities, for retention in the national collection or distribution among provincial museums, certain portions of the late Lord Avebury's collection of prehistoric and ethnographical specimens from various parts of the world, use of which was made in the writing of "Prehistoric Times." The gift includes a fine series from the early Iron Age cemetery at Hallstatt, Upper Austria, which will be kept in the British Museum, but many of the stone implements are available for distribution.

Regulations for enforcement of the new federal migratory bird law have been approved by President Wilson and now are effective. Shooting is prohibited between sunset and sunrise. Insectivorous birds are protected indefinitely, and no open season is allowed. Band-tailed pigeons, cranes, wood ducks, swans, curlew, willet, upland plover and smaller shore birds are protected everywhere until September 1, 1918.

In his address at the anniversary meeting of the Royal Geographical Society, Mr. Douglas Freshfield gave some details in regard to the map of Europe and the Nearer East on the 1:1,000,000 scale. Twenty-two sheets of the map have been compiled by the society

and reproduced and published by the geographical section of the general staff; eighteen sheets have been compiled and are in process of reproduction, while seventeen others are in a more or less advanced state of preparation. The scope of the map has been extended northward to the North Cape and the new Russian port of Alexandrovsk, eastward to Baghdad and the Caspian, and southward to Cairo and the head of the Persian Gulf.

THE fifth Brazilian Geographical Congress will, as we learn from *Nature,* be held at Bahia on September 7–16. There will be twelve sections, devoted respectively to the following subjects: Mathematical Geography (astronomical geography, topography, geodesy); Physical Geography (aerology, oceanography, geomorphology); Physical Geography (hydrography, potamology, limnology); Vulcanology and Seismology; Climatology and Medical Geography; Biogeography (phytogeography and zoogeography); Human Geography; Political and Social Geography; Economic and Commercial Geography, including Agricultural Geography; Military and Historical Geography; Teaching of Geography, Rules and Nomenclature; Regional Monographs.

AMONG the forthcoming publications announced by the University of Chicago Press are the following:

The Control of Hunger in Health and Disease, by Anton J. Carlson.

Finite Collineation Groups (The University of Chicago Science Series), by Hans F. Blichfeldt.

Parallaxes of 27 Stars, by Frederick Slocum and Alfred Mitchell.

Second-year Mathematics for Secondary Schools, by Ernst R. Breslich.

Agricultural Economics, by Edwin G. Nourse.

The Psychology of Religion, by George A. Coe.

Truancy and Non-attendance in Chicago, by Sophinisba P. Breckinridge and Edith Abbott.

The Electron (The University of Chicago Science Series), by Robert Andrews Millikan.

Quarter-centennial Bibliography of Faculties, by a Committee of the Faculty of the University of Chicago.

THAT 1915 was the most successful year of production in the history of the petroleum industry is shown by statistics just compiled under the supervision of J. D. Northrop, of the U. S. Geological Survey, Department of the Interior. The total quantity of crude petroleum entering the world's markets in 1915, which amounted to 426,892,673 barrels, exceeds the former record, established in 1914, by 28,194,307 barrels, or 7 per cent. The bulk of the increase in 1915 came from the United States and Mexico, though Russia, Argentina and Japan recorded significant gains. The distribution of this production is shown in the following table:

Country	Barrels of 42 Gallons	Per Cent. of Total
United States	281,104,104	65.85
Russia	68,548,062	16.06
Mexico	32,910,508	7.71
Dutch East Indies	12,386,808	2.90
Roumania	12,029,913	2.82
India	7,400,000	1.73
Galicia	4,158,899	.98
Japan and Formosa	3,118,464	.73
Peru	2,487,251	.58
Germany	995,764	.23
Trinidad	750,000	.18
Argentina	516,120	.12
Egypt	221,768	.05
Canada	215,464	.05
Italy	39,548	.01
Other	10,000	
	426,892,673	100.00

THE twenty-seventh annual conference of the Museums Association was held in Ipswich on July 10–12, when, as we learn from *Nature,* the following institutions were represented by delegates: (1) Five national museums—the British Museum, the British Museum (Natural History), the Victoria and Albert Museum, the National Museum of Wales, and the Museums of the Royal Botanic Gardens at Kew; (2) two London museums—the Horniman Museum and the Wellcome Historical Medical Museum; (3) the following twenty-five provincial museums and art galleries—Brighton, Bristol, Carlisle, Chelmsford, Derby, Dundee, Exeter, Halifax, Hastings, Hull, Ipswich, Leicester, Lincoln, Liverpool, Merthyr Tydfil, Newbury, Norwich, Perth, Peterborough, Plymouth, Reading, Salford, Warrington, Worcester and Worthing; and (4) the Museum of the University of Manchester. After a welcome by the mayor of Ipswich, the president, Mr. E. Rimbault

Dibdin, curator of the Walker Art Gallery, Liverpool, addressed the delegates, taking as his subject the effect of the war upon the art museums of the country. He had sent a series of questions to eighty-two art museums in Great Britain, and from their answers was able to give some interesting details as to their experiences. Briefly summarized, his remarks indicated that whereas several London galleries have been closed by the action of the government, and one or two others report a reduced attendance, the majority of the provincial institutions show an increased attendance, and only one has been closed. It thus appears that the protest lodged with the prime minister by the Museums Association against the government retrenchment committee's suggestion that provincial museums and art galleries should be closed has been thoroughly justified.

At the coming convention of the American Electrochemical Society which will be held in New York from September 27 to 30, one of the sessions will be devoted to "Made in America" products of the electric furnace and electric cell. These products include many of our most important staples such as copper, aluminum, abrasives, bleach and many more. It is an interesting fact that whereas other chemical industries, such as the coal-tar dye industry are primarily European, the electrochemical industry is largely American. It is here that the production of aluminum was invented and put on a commercial basis. The first plant for the electrical synthesis of the elements of the air and the production of artificial fertilizer nitrate was erected at Niagara Falls. At the Falls, also, tons of abrasives are produced in large powerful electric furnaces. The importance of these abrasives can best be appreciated by the fact that if these supplies were to cease to-day practically every mill and factory in the country would have to shut down within three months' time. Other electrochemical products of decided economical importance and value are graphite, phosphorus, hypochlorite of lime, magnesium, metal, carbon bisulphide, calcium carbide, hydrate of sodium, ferro silicon and other iron alloys which are indispensable to the steel trade.

We learn from the London *Times* that the British Advisory Council for Scientific and Industrial Research announces that it is appointing standing committees of experts to report on proposed researches of great importance submitted to it. Committees in mining and metallurgy have already been formed, consisting both of scientific men and of leaders of the industries concerned. Each committee will have two sections. Sir William Garforth, the coal owner, is chairman of the mining committee and of its nonmetals section, and Mr. Edgar Taylor, of the firm of John Taylor and Sons, owners of mines in various parts of the world, will preside over its metals section. Sir Gerard Muntz, of the Muntz Metal Company (Limited), Birmingham, has accepted the chairmanship of the metallurgy committee and of its non-ferrous section, and Sir Robert Hadfield, F.R.S., of Hadfield's (Limited), Sheffield, is chairman of its ferrous section. A similar committee for engineering is contemplated. The council is making grants to various societies to enable them to continue researches already in progress for which the necessary staff and equipment are obtainable, and quite recently valuable results have been obtained from researches connected with the production of optical glass. The council has also recommended a grant in aid of an important new research into the manufacture of hard porcelain, especially for domestic purposes. This has been undertaken by the Stoke-on-Trent Central School of Science and Technology, and the Staffordshire Potteries Manufacturers' Association, with a view to establishing the manufacture of hard porcelain in this country. Particulars have been obtained of the research work, not only of the scientific and professional societies, but also of the universities and higher technical schools, with a view to establishing a register of research. The possibility of collecting information under the seal of confidence as to the research work of particular firms is also being considered. The training of an adequate supply of research workers will be an important branch of the advisory council's work. It is impossible to announce definite

plans during the war, but the council has already made recommendations which, if adopted, will, it believes, secure that all that is practicable in existing circumstances shall be done.

UNIVERSITY AND EDUCATIONAL NEWS

AN endowment of $70,000, to create the "Howison Foundation," has been given to the University of California by George Holmes Howison, professor of philosophy, emeritus, in the University of California, and Lois Caswell Howison, his wife. Subject to an annuity during their lifetime, the endowment is to maintain the Howison Traveling Fellowship, of $1,200 to $1,500 a year, $600 a year to constitute the Lois Caswell Fund for the Dean of Women to aid deserving women students, and three or four Anne Sampson scholarships or fellowships, in honor of Mrs. Howison's mother, for women students in English literature and criticism.

DR. ALICE ROHDE has been appointed instructor in research medicine in the George Williams Hooper Foundation for Medical Research of the University of California. A graduate of the University of Chicago of 1903 and of Johns Hopkins Medical School of 1910, Dr. Rohde has had special training in research medicine under Professor Walter Jones and Professor J. J. Abel at the Johns Hopkins University and under Dr. Emil Fischer at Berlin.

DR. JOSEPH H. GROSSMAN, of Cleveland, has been appointed lecturer on diagnosis of tuberculosis in the school for applied social sciences of Western Reserve University.

AT the last meeting of the corporation of the Massachusetts Institute of Technology the following assistant professors were promoted to be associate professors: Daniel F. Comstock, theoretical physics; George L. Hosmer, topographical surveying; C. L. E. Moore, mathematics; Ellwood B. Spear, inorganic chemistry; William E. Wickenden, electrical engineering. The following instructors were made assistant professors: James M. Barker, structural engineering; Ralph G. Hudson and Waldo V. Lyon, electrical engineering, Earl B. Millard, theoretical chemistry; Thomas H. Huff, aeronautical engineering.

MR. T. E. GORDON has been appointed professor of surgery in Trinity College, Dublin, in succession to Professor E. H. Taylor.

PROFESSOR J. J. VAN LOGHEM has been appointed to the newly founded chair of tropical hygiene in the University of Amsterdam.

DISCUSSION AND CORRESPONDENCE

AMBLYSTOMA NOT AMBYSTOMA

TO THE EDITOR OF SCIENCE: In a letter printed in SCIENCE for June 30, 1916 (43: 929), Dr. M. W. Lyon, Jr., presents and defends the thesis, "*Ambystoma* not *Amblystoma*." If so, the spotted salamander has another spot on his name. *Ambystoma* is a dark saying. Dr. Lyon refers to the original paper of the author, Tschudi, 1839 (Scudder gives 1838), and says that the name is "written by him *Ambystoma* in four different places in his work, and only in that manner." He adds: "The derivation of the word is not given by him, and there is nothing to indicate that he intended *Amblystoma* and made a lapsus calami."

But outside of Tschudi's print, there *is* something to indicate that he intended *Amblystoma,* and made a lapsus of some sort; namely, the fact that *Ambystoma* has no assignable meaning in any known language, while *Amblystoma* has an assignable meaning in the language of science—that European or cosmopolitan Latin which has supplied the main vocabulary of science, and will probably supply it for ages to come; being, like the rustic's indefluent river, *in omne volubilis aevum.*

In this voluble vocabulary *Amblystoma,* or the adjective latent behind this name, means "having a blunt mouth." In form and meaning it is parallel to *Amblystomus,* the name of a genus of beetles, and to *Amblyrhynchus,* the name of a genus of lizards—which are cousins, once removed, of salamanders. These are but three of a long string of zoologic names beginning with *Ambly-*. But *Ambystoma* stands alone, though it appeared in the same decade with most of the others.

Whether *Amblystoma,* with the sense "having a blunt mouth," is an accurate or a suita-